



USDA Forest Service - Southern Research Station - 320 Green Street, Athens GA 30602 - <http://www.srs.fs.usda.gov/disturbance>



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Outreach Activities:

- Four organized groups totaling 65 people visited the Brender Demonstration Forest in January, including a Boy Scout troop from Americus, GA; 2 outdoor labs from Mercer University studying biomass; and a group consisting of representatives from the Department of Natural Resources, the GA Forestry Commission, Southeastern Wood Products Association, and the Brender Demonstration Forest, who met to develop a training course on how to lay out the best streamside management zones prior to timber sales. A total of 35 people came by the office for information and 81 people hiked the Hitchiti Interpretive Trail. Visitors came from as far away as Statesboro, GA.

- Recent fall and winter deer hunts on Brender Forest resulted in 47 deer being taken. The spring turkey hunt will begin March 28, 2006. The Oconee District completed their prescribed burns; a total of 732 acres were burned, including 12 plots in the Long-Term Vegetation Response to Interval Burning Study and one in the Red-Cockaded Woodpecker (RCW) habitat study.



Mercer University students studying biomass.

Technology Transfer:

- Joe O'Brien gave an invited presentation, "A model of fire driven stand dynamics in Bahamian pine forests," at the Pine Rockland Conference 2006, "Bridging the Gaps between Florida and the Bahamas" held at Florida International University in Miami, Florida. The conference was attended by about 80 land managers, researchers and landowners who work in or manage tropical pine rocklands. The conference included a trip to Marsh Harbour, Bahamas where Joe led a fieldtrip to his study sites in Abaco National Park. At the study site, Joe discussed his research as well as his impressions of fire management needs for the islands. Ken Outcalt, O'Brien, and a group of twenty members of the Pine Rockland Working Group developed a fire management plan for Bahamian National Parks at a workshop organized

by Chris Bergh of The Nature Conservancy. Also in attendance were representatives of the Bahamas National Trust, Bahamas Department of Agriculture, Forfar Biological Station, and Friends of the Environment. Unfortunately, no hunters, who are the de-facto fire managers on the island, attended the workshop. They are to be included in a follow-up workshop aimed at various user groups. While there was initially much disagreement over what were the pressing management needs, a consensus was finally reached that identified the reduction of coppice fires as the main initial management target. Using fire to increase stand structural diversity was also an objective.

- Joseph J. O'Brien gave a talk in the Joseph Jones Ecological Research Center Seminar series, "Fire ecology in Neotropical pine forests." The Joseph



Rivean Riley, Naturalist at Forfar Biological Station, Andros Island makes a traditional "bush tea". Besides being a naturalist, and a local politician, Rivean is an expert in Bahamian ethnobotany. The tea prepared had more than 5 species of native plants including love vine (*Cassytha filiformis*) strogback (*Bourreria ovata*) and five finger (*Tabebuia bahamensis*). The tea is used as a general tonic and a male aphrodisiac. It is served with the addition of sweetened condensed milk to neutralize some of the tannins. It tasted good.



Joe O'Brien talking about the fire regime in the Abaconian pineyards as well as the experimental design of the study in southern Abaco.

Technology Transfer:

W. Jones Ecological Research Center at Ichaaway is located near Newton, Georgia. While at the Jones Center, Joe set up instruments to measure transpiration in the CFATES (Carbon Fine Root Allocation and Transfer at Ecosystem Scales: Root Architecture, Mycorrhizae and Stored Carbon Regulation of Belowground Dynamics) plots, a study funded by the National Research Initiative.

- John Stanturf was the invited keynote speaker at the annual meeting of the Korean Forest Society. His presentation was on “What is Forest Restoration.” The meeting was held on the campus of Seoul National University in Seoul, Republic of Korea. While there, he met with faculty and graduate students in forestry. His host was Prof. Don Koo Lee, president of IUFRO and former dean of the college.

- John Stanturf was an invited speaker at the “International Symposium on Conservation and Management of Natural Resources in DMZ, Korea” held in Gangwon Province, Republic of Korea. The De-Militarized Zone (DMZ) and associated Civilian Control Zone (CCS) together is a buffer between North and South Korea, established at the end of the Korean War. Because it has been protected from general human disturbance, it contains a diverse flora and fauna that has disappeared from most of the country, although continuing military activities and wildfire are the source of continuing disturbance. John’s talk was on “Sustainability, Disturbance, and Restoration.”

- Mac Callaham taught a unit on fire effects on soils for a group of managers in Pigeon Forge, TN. This unit is part of a week-long course for fire training, RX 310, Introduction to Fire Effects.

- Callaham hosted Chuck Rhoades, a Research Biogeochemist with the Rocky Mountain Research Station, for a 3-day visit to the Athens area. Rhoades received his PhD from the Institute of Ecology at UGA in 1997, and was warmly welcomed back when he delivered a departmental seminar at the Institute. While in the area, Chuck also visited the Coweeta lab, and delivered a seminar there detailing his current work at the Fraser Experimental Forest in Colorado.

- Callaham is organizing a symposium at the Ecological Society of America annual meetings in Memphis this summer. The symposium is titled “Returning Soils to Restoration Ecology: Rethinking the Trade of Structure for Function.” Callaham and symposium co-organizer, Christine Hawkes (U. of Texas) put the symposium together in hopes of promoting dialogue between soil

Technology Transfer:



A wooden sculpture in the foyer of the Wood and Forestry Museum on the campus of the Korean Forest Research Institute in Seoul, South Korea.



The banquet table at the reception for the Korean Forest Society. Traditional Korean dishes such as kimchee, as well as Japanese-style sashimi were served.



Mac Callaham pointing to his trophy worm, Appalachicola Grunter.

Technology Transfer:

ecologists and restoration ecologists, and with the objective of integrating the principles of soil ecology into the practice of restoration ecology.

- Mac Callaham was a co-author on a paper presented by Carla Giai at the Central Hardwoods Forest Conference in Knoxville, TN. Carla is a graduate student at Ohio State University, and is working on the Fire and Fire Surrogate Study plots in the southern Ohio hill country. Full citation of the presentation is below.

- Scott Goodrick gave a seminar entitled “Using the Weather Research and Forecast (WRF) model for high resolution simulations of fire plumes” as part of the University of Houston’s atmospheric science graduate student seminar course. The seminar detailed some of the fire-atmosphere interaction work that Scott and Dr. Phil Cunningham of Florida State University have been collaborating on over the past three years. Dr. Sharon Zhong of the University of Houston Geosciences Department invited Scott to give the seminar.

- In May, Ken Outcalt will teach the Fire Ecology of Southern Forest portion of the Technical

Personnel News:

- John Stanturf has been invited to give a talk at a meeting in Sweden in October 2006 by Oddvar Fiskesjö, project leader and national park manager in Söderåsen National Park in Skåne, Sweden. The conference is a final activity of a project “Restoration of deciduous forest in Söderåsen National Park” which deals with the initial measures in converting spruce forests and clear felled areas to deciduous forest. The project is co-financed by the EC environmental fund LIFE–Nature and the Swedish Environmental Protection Agency, with a budget of 1.7 M Euro www.nationalpark-soderasen.lst.se/life/index.html.

- John Stanturf will be in Washington, DC for a two-month detail as Acting Director, Forest Management Sciences Staff (formerly Vegetation Management and Protection). His sentence runs from March 13 through May 12. This detail is a result of the promotion of Jimmy Reaves to Associate Deputy Chief (see below).

Meetings/Reports:



Senior staff of the Korean Forest Research Institute at the entrance to their campus. Director General Joon Hwan Shin is third from the left.

• John Stanturf and Lynne Breland met with Prof. Don Koo Lee, IUFRO President, and several faculty of the Forest Science Department of Seoul National University to discuss the conference on forest landscape restoration that will be held in 2007 in Korea. John and Lynne also met with the interim Director General Joon Hwan Shin and staff Young-Kul Kim, Jung-Hwan Park, and Rin Win Joo of the Korean Forest Research Institute. The KFRI were invited to be the host of the landscape restoration conference, and DG Shin formally confirmed their role. A local arrangements committee will be formed in Seoul; Jong-Hwan Lim is the KFRI contact, along with Joo Han Sung. The anticipated date for the 4- to 6-day conference will be at the end of April or beginning of May, 2007. Three locations are being considered: Seoul, Kyeongju, or Jeju Island.

• Tom Waldrop met with other members of the Ecological and Environmental Science Portfolio Team (Portfolio B), a component of the National Fire R&D Strategic Planning Area. The group is chaired by Ed Deput of the Pacific Northwest Station. Members include Jeanne Chambers of the Rocky Mountain Research Station, Peter Stine of the Pacific Southwest Station, Tom Schuler of the Northeastern Research Station; Waldrop represents the Southern Research Station. Liaisons with the Washington Office include Al Riebau, Sue Conard, and Deb Hayes. The group is charged with providing support information in the budget-making process for fire research. They developed a set of criteria that will be used to evaluate research areas and individual research projects within each station. They are beginning to collect information from each research unit about ongoing projects and broad work areas being conducted in Fire Effects on Ecosystem Components or Fire and Environment Interactions.

• Ken Outcalt participated in the Pine Rockland Conference in Miami and the field trip to Abaco Island, Bahamas. While there he participated

Meetings/Reports:

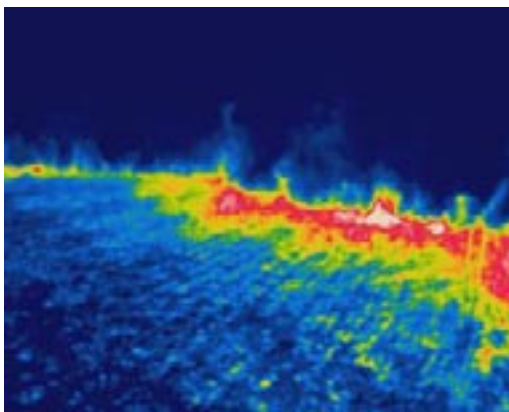
in a group discussion and offered formal input into a draft Fire Management Plan for Abaco National Park, being developed by The Nature Conservancy. In addition, Joe O'Brien and Ken discussed the Unit's ongoing research at the Park with Chris Berg of The Nature Conservancy.

Partnerships:

• While in Korea, John Stanturf met with Yeong Dae Park and discussed potential collaboration on restoration issues in Mongolia, the subject of his dissertation work. Park has applied for funding from the Korean government to support him as a Visiting Scientist in Athens with the unit.

• Gary Achtemeier's partnership with the Fish & Wildlife Service on a project in Manteo, North Carolina looking at prescribed burning on pocosins used an aircraft donated by the National Park Service for a recent burn. Gary equipped the aircraft with temperature sensors for measuring plume proximity lapse rates of temperature. The project is funded by the Joint Fire Sciences Program.

• Scott Goodrick participated in the Fireflux field project, a joint collaboration of the University of Houston and the Forest Service's North Central and Southern Research Stations. This project is designed to examine fire-atmosphere interactions by measuring turbulent fluxes of momentum, heat and moisture. The prescribed burn was conducted in a coastal prairie at the University of Houston Coastal Center. A sampling of the instrumentation on the burn included two Doppler sodar units, a 42 meter flux tower configured with three levels of flux measurements, soil moisture/temperature, net radiometer, and a network of thermocouples. The burn was documented by numerous digital cameras, video cameras and an infrared digital camera. This project will provide one of the most extensive data sets regarding turbulent fluxes associated with wildland fires.



Infrared image from Fireflux experiment (dark blues represent temperatures below 300° C while white areas approach 850° C)

Visitors:

• Safayia Samman, Environmental Education person in the WO, met briefly with John Stanturf and Barbara McDonald to discuss activities of the education folks. Samman was in town to attend the Technical Assistance Visit of the recreation and urban forestry unit.

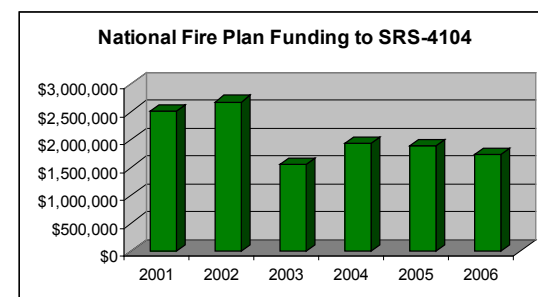
• Dave Wear, station reorganization wizard, came to the lab to present the work of the committee and to answer questions.

• David Green, Project Leader of the Engineered Properties and Structure Project at the Forest Products Laboratory in Madison WI visited with Alex Clark and John Stanturf. Dave shared insight into the FPL reorganization. Alex discussed the wood quality research being conducted by SRS-4104 and the Wood Quality Consortium at the Warnell School of Forestry at the University of Georgia.

• Glen Murphy, Professor at Oregon State University and Laurie Schimleck, Associate Professor in the Warnell School of Forestry at the University Georgia visited with Alex Clark. Murphy had given an invited lecture for the Warnell School Centennial Celebration and discussed his NIR research with Alex. Alex and Laurie informed Murphy of the research the Wood Quality Consortium is conducting, including the NIR work they are collaborating on.

Funding:

The unit received its final allocation of National Fire Plan funding for Fiscal Year 2006. Total NFP funding is \$1,736,543, continuing the downward trend.





News from Around the Region:

• Bov Eav, Associate Deputy Chief for Research and Development of the Forest Service, was named as Director of the Pacific Northwest Station. Jimmy Reaves, currently Vegetation Science Staff Director in the Washington Office, takes over as Associate Deputy Chief.

• In December, John Toliver, Deputy Station Director for the Rocky Mountain Research Station, was named to a special assignment with the Southern Research Station (SRS) to lead and coordinate a hurricane aftermath science team. Since then, John has had to schedule surgery and will need at least a few weeks for recovery. Deputy Chief Ann Bartuska named Janine Powell, Research Assistant Director for the Rocky Mountain Research Station, to the same special assignment with the Southern Research Station during Toliver's recovery period.

• Michael Rains, Director of the Northern Research Station announced an urban natural resources stewardship initiative by the Northern Research Station. The Urban Natural Resources Institute (UNRI) will begin service as it serves as a point of contact for focused research, development and information exchange on urban natural resource management. The Institute consists of Northern Research Station scientists who are conducting science-based research on urban natural resources issues across the country. UNRI is a component of the Northern Research Station's Science Applications Unit. Dr. David Bloniarz is the coordinator of the UNRI; he's located in Amherst, Massachusetts.

• The Forest Service has signed a Memorandum of Understanding (MOU) with the Society for Ecological Restoration International. This partnership will develop and provide training to professional land managers regarding restoration ecology and science-based techniques to restore and rehabilitate native ecosystems. Work will include surveys, research and management to restore, conserve and manage the nation's ecosystems, and development of guidelines for restoring disturbed ecosystems.



• The Scandinavian Journal of Forest Research is offering its Volume 20, Supplement 6, "Disturbance dynamics and ecosystem-based forest management," free to view and download online. This supplement contains papers given at the Scandinavian-Baltic Disturbance Network meeting held in Estonia in 2004. The papers represent both overviews and individual experiments that revolve around "near-nature" management. Included is a paper by Keith Moser and Dale Wade on fire exclusion in longleaf pine forests (full citation below). Free online access ends in April 2006. <http://www.journalonline.tandf.co.uk/openurl.asp?genre=article&issn=0282-7581&volume=20&p=6&spage=2>

• A strategic science collaboration has been formed to promote discovery and sustain the excellence of the South's wood energy research capacity. The Southern Wood Energy Research (SoWER) Group brings together three leading research and teaching universities in the southern United States; North Carolina State University, Mississippi State University and the University of Tennessee formed a strategic partnership to advance their common interests in biofuels, bioenergy, and biobased products research. NC State has strengths in pulp and paper science; Mississippi State is strong in bio-oils; and the University of Tennessee has strengths in composites, characterization, and lignin chemistry. SoWER's vision is for a broad

program of fundamental science that is integrated across institutions and utilizes regional and industry partnerships that will make discoveries possible and lead to the best possible management of finite resources. Contact: Steve Kelley (steve_kelley@ncsu.edu); Liam Leightley (lleightley@cfr.msstate.edu); Tim Rials (trials@utk.edu). SoWER is supported in part by the Wood Utilization Research Program, USDA-CSREES.



• The Norwegian firm Havgul AS has applied for a concession for the world's biggest wind power development off western Norway with total capacity of 1,500 megawatts produced by hundreds of turbines. The world's biggest wind power parks are now off Denmark, the leading wind energy nation, which has two parks with capacity of around 160 MW each. (Source: Planet Ark)

• The European Commission has presented its plans for the establishment of a European Institute of Technology (EIT) by 2009. The aim of such an institute would be to strengthen Europe's knowledge-triangle of research, education and technology transfer by providing critical mass and a world-class model for teaching and research and through partnerships between academia and businesses. Compared to the European Research Council (ERC), which funds research projects on basic research, the EIT would be 'a knowledge operator', not a funding agency, seeking to educate, conduct research and apply the outcomes of research to commercial ends. The plans describe the overall framework for the establishment of such an institute but do not include any reference to its geographical location. A 1-2 billion euro budget, coming from the EU, member states and industry, is proposed for 2009-2013. The EIT would be a two-level organization consisting of a central governing body, a system of knowledge communities and other partnering organizations. The government board would decide on the strategy and the budget of the EIT and select and evaluate the knowledge communities. The knowledge communities would bring together departments of universities, companies and research institutes to perform research, education and innovation activities in inter-disciplinary strategic areas. These departments and their personnel would be seconded to the EIT and thus cease to be part of their home organizations for a certain period. The EIT would have its own legal personality and be independent of national regulation. Strategic research areas would include at least nanotechnology and information and communication technologies. (www.EurActiv.com)



FY 2006 Publications (* denotes new publication this month)

Refereed Journals and Book Chapters

*Frank, J.H., Foltz, J.L., and Almquist, D.T. 2005. The female of *Oxybleptes meridionalis* (Coleoptera: Staphylinidae: Staphylininae) and range extension for *Oxybleptes*. *Florida Entomologist* 88(2):199-200. (Unit funded under agreement #02-1A-11330136-030; funding source Joint Fire Sciences Program)

Jordan, L., Daniels, R.F., Clark, A. III, He, R. 2005. Multilevel nonlinear mixed-effects models for the modeling of earlywood and latewood microfibril angle. *Forest Science* 51(4): 357-371.

Liu, Y.-Q. 2005. Atmospheric response and feedback to radiative forcing from biomass burning in tropical South America. *Agricultural and Forest Meteorology*. 133, 40-53.

Liu, Y.-Q. 2005. Land breeze and thermals: A scale threshold to distinguish their effects. *Advances in Atmospheric Science*, Vol. 22, No. 6, 889-902

Liu, Y.-Q., Fu, R., Dickinson, R. 2005. Smoke aerosols altering South American monsoon. *Bulletin American Meteorological Society* 86(8): 1062-1063.

Liu, Y.-Q., Avissar, R. 2005. Modeling of the global water cycle - analytical models. In M. G. Anderson, Ed. *Encyclopedia of Hydrological Sciences*. John Wiley & Sons, pp. 3456.

Logan, S.R., Edwards, M.B., Shiver, B.D. 2005. Survival and growth of seed trees 20 years after a natural regeneration cut in the Piedmont of Georgia. *Southern Journal of Applied Forestry* 29(4): 173-178.

*Moser, W.K., Wade, D.D. 2005. Fire exclusion as a disturbance in the temperate forests of the USA: Examples from longleaf pine forests. *Scandinavian Journal of Forest Research* 20 (Suppl 6): 17-26.

Qu, J., Hao, X., Yang, R., Sommers, W., Dasgupta, S., Bhoi, S., Kafatos, M., Liu, Y.-Q., Achtemeier, G., Riebau, A.R., Coronado, P. 2005. Bridging Earth observations: remote sensing measurements, fire modeling, and air quality decision support system in the eastern United States. *Earth Observation Magazine* 14 (6).

*Rall, A.E. 2004. Effects of longleaf pine management practices on the herpetofauna of south Alabama. M.S. Thesis, Auburn University. 61p. (Unit funded under agreement #02-1A-11330136-030; funding source Joint Fire Sciences Program)

*Reilly, M.J., Wimberly, M.C., Newell, C.L. 2006. Wildfire effects on plant species richness at multiple spatial scales in forest communities of the southern Appalachians. *Journal of Ecology* 94: 118-130.

Reitz, R. 2005. Forests and people: The symbiotic relationship. Pp. 89-93 *In American Perspectives on the Wildland/Urban Interface*. The National Wildland/Urban Interface Fire Program; 113 p.

Rhy, Soung-Ryoul, Chen, Jiquan, Crow, Thomas R., Saunders, Sari. C. 2004. Available fuel dynamics in nine contrasting forest ecosystems in North America. *Environmental Management* Vol. 33, Supplement 1, pp. 87-107.

*Rompere, Ghilain. 2003. Successful nesting of the sharp-shinned hawk (*Accipiter striatus*) in a longleaf pine stand in southern Alabama. *Alabama Birdlife* 49(1):10-13. (Unit funded under agreement #02-1A-11330136-030; funding source Joint Fire Sciences Program)

Saunders, S.C., J. Chen, T.D. Drummer, E.J. Gustafson, and K.D. Brosofske. 2005. Identifying scales of pattern in ecological data: A comparison of lacunarity, spectral and wavelet analyses. *Ecological Complexity* 2: 87-105.

Schulte, Lisa A. and Mladenoff, David J. 2005. Severe wind and fire regimes in northern forests: Historical variability at the regional scale. *Ecology*, 86(2): 431-445.

*Sharp, N.W. 2005. Demography of small mammal populations in longleaf pine undergoing restoration. M.S. Thesis, Auburn University, 84p. (Unit funded under agreement #02-1A-11330136-030; funding source Joint Fire Sciences Program)

Varner, J.M. III, Gordon, D.R., Putz, F.E., Hiers, J.K. 2005. Restoring fire to long unburned *Pinus palustris* ecosystems: Novel fire effects and consequences for long-unburned ecosystems. *Restoration Ecology* 13(3): 536-544. (Unit funded under agreement #02-1A-11330136-030; funding source Joint Fire Sciences Program)

Proceedings and Reports

Brockway, D.G., Outcalt, K.W., Tomczak, D.J., Johnson, E.E. 2005. Restoration of longleaf ecosystems. USDA Forest Service Southern Research Station General Technical Report SRS-83, Asheville, NC; 34 pp.

Cleland, David, Crow, Thomas, Saunders, Sari, Maclean, Ann, Dickmann, Donald. 2005. Characterizing historic and contemporary fire regimes in the Lake States. Final Report to the Joint Fire Science Program. 81 pp.

Kennard, D, Fowler, C. T., Hubbard, W. and Rauscher, M. 2005. The Encyclopedia of Southern Fire Science. In: Kush, J.S., comp., *Longleaf Pine: Making Dollars and Sense*, Proceedings Fifth Longleaf Alliance Regional Conference, 2004 October 12-15, Hattiesburg, MS, Longleaf Alliance Report No. 8: 97-100. (SRS-4104-6009)

Liu, Y.-Q. 2005. Spatial relationships between SST and U.S. Wildfires, *Proceedings of the Sixth Fire and Forest Meteorology Symposium*, 25-27 October 2005, Canmore, AB, Canada, Paper 6.2, P1-6 (available in CD). http://ams.confex.com/ams/6FireJoint/techprogram/programexpanded_302.htm

Outcalt, K.W. 2005. Restoring structure and composition of longleaf pine ecosystems of the Gulf Coastal Plain. In: Kush, J.S., comp., *Longleaf Pine: Making Dollars and Sense*, Proceedings Fifth Longleaf Alliance Regional Conference, 2004 October 12-15, Hattiesburg, MS, Longleaf Alliance Report No. 8: 97-100. (SRS-4104-6009)

Outcalt, K.W. 2005. National Fire and Fire Surrogate Study, 7th Annual SMIC Meeting and Field Trip. October 2005. Solon Dixon Forestry and Education Center, Andalusia, AL [Report]

Outcalt, K.W. 2005. National Fire and Fire Surrogate Study, Fuels Treatment Workshop and Field Trip. October 2005. Solon Dixon Forestry and Education Center, Andalusia, AL [Report]

Schoenholtz, S.H., **Stanturf, J.A.**, Allen, J.A., Schweitzer, C.J. 2005. Afforestation of agricultural lands in the Lower Mississippi Alluvial Valley: The state of our understanding. pp. 413-432. In L.H. Fredrickson, S.L. King, and R. M. Kaminski, eds. *Ecology and Management of Bottomland Hardwood Systems: The State of our Understanding*. University of Missouri-Columbia. Gaylord Memorial Laboratory Special Publication No. 10. Puxico, MO.

***Stanturf, J.A.** 2006. What is forest restoration? P. 23-36 in Proceedings of the 2006 Annual Meeting of the Korean Forest Society, Seoul National University, Seoul, Republic of Korea.

Other Publications

Goodrick, S. Stanturf, J., Sullivan, F., Outcalt, P., Gillmore, G., McCracken, R., Mundy, E. 2005. Biennial Southern Silvicultural Research Conference Proceedings 1-12, 1980-2003. Archive and bibliography on CD-ROM.

Outcalt, K.W. 2005. Prescribed Burning Research in the Piedmont of Georgia. Demonstration Forest Project Hitchiti Experiment Forest, Jarrell, GA. [3-Panel Outdoor Display]

Outcalt, K.W. 2005. Prescribed Burning Research on the Hitchiti Experimental Forest. Demonstration Forest Project Hitchiti Experiment Forest, Jarrell, GA. [Information Card]

Outcalt, K.W. 2005. Long-term Dormant-Season Burning Study Located in the Palmetto/Gallberry Fuel Complex. Demonstration Forest Project Osecola National Forest, Olustee, FL. [Outdoor Display]

Outcalt, K.W. 2005. We can't keep fire out of these woods. We can only choose between prescribed burns or wildfire. Demonstration Forest Project Osecola National Forest, Olustee, FL. [Outdoor Display]

Outcalt, K.W. 2005. We can't keep fire out of these woods. We can only choose between prescribed burns or wildfire. Demonstration Forest Project Osecola National Forest, Olustee, FL. [Information Card]

Outcalt, K.W. 2005. Fire and Fire Surrogate Study in the Gulf Coastal Plain. October 2005 Solon Dixon Forestry and Education Center, Andalusia, AL [Bookmark]

Outcalt, K.W. 2005. Fire and Fire Surrogate Study in the Southern Coastal Plain. October 2005 Myakka River State Park, Sarasota, FL [Bookmark]

***Waldrop, T.** 2006. Ecological impacts of fuel reduction: presentations at a workshop held 24-25 January 2006 in Asheville, North Carolina. CD-ROM available from the RWU-4104, Athens, GA.

Abstracts and Posters

Achtemeier, Gary L., and Luke Naeher. 2005. Measurements of ground-level PM_{2.5} concentrations downwind from Southern prescribed burns. Sixth Symposium on Fire & Forest Meteorology and the 19th Interior West Fire Council Meeting, October 25-27, Canmore, Alberta, Canada. Sponsored by the American Meteorological Society [Poster]

Achtemeier, Gary L. 2005. On plume rise – matching Daysmoke with Briggs Equations for industrial stacks. Sixth Symposium on Fire & Forest Meteorology and the 19th Interior West Fire Council Meeting, October 25-27, Canmore, Alberta, Canada. Sponsored by the American Meteorological Society [Abstract]

Alahari, N., Sublette, K., Jennings, E., Thoma, G., Wolf, D., Duncan, K., **Callaham, M. Jr.**, Todd, T. 2005. Earthworms as ecoengineers in the restoration of oil and brine impacted soils following remediation. International Petroleum Environmental Conference, November 2005, Houston, Texas [Abstract]

Callaham, M.A., Richter, D.D., Hofmockel, M. 2005 Long-term land use effects on soil invertebrate communities in Southern Piedmont soils. Ecological Society of America annual meeting, 8-11 August, Montréal, Canada [Poster]

Callaham, M.A., Jr., Stanturf, J.A., Boerner, R.E.J. 2005. Viewing ecosystem restoration through the glass of soil ecology: Making use of the illuminated ped. Symposium Honoring Dr. David C. Coleman, 28-29 October, Athens, Georgia [Poster]

Callaham, M.A. Jr., Todd, T.C., Kitchen, D.J., Blair, J.M., Williams, M.A., Rice, C.W. 2005. Long-term studies on soils and soil biology in a Kansas tallgrass prairie: Stories that only time can tell. Invited symposium presentation at the Soil Science Society of America Annual Meeting, 6-10 November, Salt Lake City, Utah [Abstract]

Camp, D.L., S.R. Bennett, M.A. Callaham, Jr., and P.F. Hendrix. 2006. Native and exotic earthworm effects on C and N dynamics in a growth chamber experiment. Poster Presentation at 12th Annual Ecology Student Symposium at the University of Georgia, Institute of Ecology, Athens, GA. [Published abstract]

Canfield, J.M., Linn, R., Cunningham, P., **Goodrick, S.L.** 2005. Modeling effects of atmospheric stability on wildfire behavior. Sixth Symposium on Fire & Forest Meteorology and the 19th Interior West Fire Council Meeting, October 25-27, Canmore, Alberta, Canada. Sponsored by the American Meteorological Society [Abstract]

Cunningham, P., **Goodrick, S.L.** 2005. High-resolution numerical model simulations of fire plume dynamics. 2005. Sixth Symposium on Fire & Forest Meteorology and the 19th Interior West Fire Council Meeting, October 25-27 Canmore, Alberta, Canada. Sponsored by the American Meteorological Society [Poster]

DiCosty, Ralph J., Callaham Jr., Mac A., Stanturf, John A. 2005. Atmospheric deposition and re-emission of mercury estimated in a prescribed forest fire experiment in Florida, USA. Soil Science Society of America Annual Meeting, 6-10 November, Salt Lake City, Utah [Poster]

*Giai, C., **Callaham, M.A. Jr.**, and Boerner, R.E.J. 2006. A mechanistic approach to determining why fire and thinning affect soil organic matter and nutrient status in Appalachian oak forests. Central Hardwoods Forest Conference, February 27-March 1 2006, Knoxville, TN [Poster]

Goodrick, S.L. 2005. Building historical gridded weather data sets for fire program analysis. Sixth Symposium on Fire & Forest Meteorology and the 19th Interior West Fire Council Meeting, October 25-27, Canmore, Alberta, Canada. Sponsored by the American Meteorological Society [Poster]

Goodrick, S.L., Cunningham, P. 2005. A mechanism for the formation of transverse horizontal vortices on wildland fires. Sixth Symposium on Fire & Forest Meteorology and the 19th Interior West Fire Council Meeting, October 25-27, Canmore, Alberta, Canada. Sponsored by the American Meteorological Society [Abstract]

Goodrick, S.L., Hanley, D.E. 2005. Atmospheric teleconnections and wildfires in the southeastern United States. Sixth Symposium on Fire & Forest Meteorology and the 19th Interior West Fire Council Meeting, October 25-27, Canmore, Alberta, Canada. Sponsored by the American Meteorological Society [Poster]

Hanley, D.E., Cunningham, P., **Goodrick, S.L.** 2005. The interaction between a wildfire and a sea-breeze front. Sixth Symposium on Fire & Forest Meteorology and the 19th Interior West Fire Council Meeting, October 25-27, Canmore, Alberta, Canada. Sponsored by the American Meteorological Society [Poster]

Linn, R.R., Canfield, J., Winterkamp, J., Cunningham, P., Colman, J., Edminster, C., **Goodrick, S.L.** 2005. Numerical simulations of fires similar to those of the international crown fire modeling experiment. Sixth Symposium on Fire & Forest Meteorology and the 19th Interior West Fire Council Meeting, October 25-27, Canmore, Alberta, Canada. Sponsored by the American Meteorological Society [Abstract]

Liu, Y.-Q., G. Achtemeier and S. Goodrick. 2005. CMAQ-Daysmoke as a Smoke and Air Quality Management Technique: A Case Study of a Prescribed Burning in Georgia. In: Proceedings Sixth Fire and Forest Meteorology Symposium, October 25-27, Canmore, AB, Canada [Abstract]

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Photos from Masthead: Some of the mammals our researchers see in the woods.



Badger
Taxidea taxus



Beaver
Castor canadensis



Gray Squirrel
Sciurus carolinensis



Opossum
Didelphis marsupialis



Porcupine
Erethizon dorsatum



Eastern Cottontail
S. floridanus



Raccoon
Procyon lotor



Striped Skunk
Mephitis mephitis



Weasel
Mustela frenata



Upcoming Events:

2006

Mar 1-2	North Carolina Wildland Fire Symposium, Greensboro, NC; http://www.ncfirewise.org	Aug 6-11	Ecological Society of America annual meeting, Memphis, TN; http://www.esa.org/memphis/
Mar 8-9	Wildland Fire 2006, Phoenix, Arizona; http://www.iafc.org/wildland	Aug 8-10	Forest and Water in a Changing Environment Beijing, China; Chinese Academy of Forestry, Beijing Forestry University and Southern Research Station.
Mar 24-25	The Seventh Eastern Old-Growth Forest Conference, Little Rock, Arkansas; pre-registration will be required. http://www.srs.fs.usda.gov/4106/meetings/EOGC2006/EOGC2006.htm	Aug 22-25	5th European Conference on Ecological Restoration: "Land use changes in Europe as a challenge for restoration ecological, economical and ethical dimensions" University of Greifswald, Germany http://www.uni-greifswald.de/SER2006
March 27-30	"Fuels Management -- How to Measure Success" conference sponsored by the International Association of Wildland Fire (IAWF), Portland, OR; www.iawfonline.org	Aug 28-Sep 1	IEA Bioenergy Task 29, Task 31 and Task 39, International Workshop "Biofuels and Bioenergy: Challenges and Opportunities," University of British Columbia, Vancouver Canada; http://www.ieabioenergytask31.org/
Mar 29-Apr 2	American Society Environmental History Annual Meeting, St. Paul, Minnesota; http://www.h-net.org/~environ/ASEH/conferences.html	*Sep 11-14	Baltic-Scandinavian Disturbance Network annual meeting, Tromsø, Norway with field excursions to Lapland in Finland (Alta, Lakselv and Kilpisjärvi); http://www.eau.ee/~ecosyst/index.php?page=coming
*Apr 4-6	Southern Research Station Management Team Meeting, Durham, NC	Sep 25-28	2006 biennial meeting Short Rotation Woody Crops Operations Working Group, Red Lion Inn, Pasco, Washington; tentatively, joint meeting with Poplar Council of Canada, US Poplar Council, IUFRO Temperate Short Rotation Forestry Working Party 1.03.02, and SAF Agroforestry Working Group;
Apr 6-7	Southern Regional Conference on Forestry Technology Transfer and Science Delivery, San Antonio, Texas	Sep 25-27	IUFRO Oak Silviculture Working Party (1.06) meeting, Stevens Point, WI; optional pre-conference field trip to SW WI on Sept 21-23, and optional post-conference tour to northern WI on Sept 28-30.
Apr 8-12	International Conference on Hydrology and Management of Forested Wetlands, New Bern, North Carolina; http://www.asae.org/imis/meeting/forestcall.cfm	Sep 26-19	Patterns and Processes in Forest Landscapes; Consequences of Human Management, University of Bari, Italy; IUFRO 8.01.03 Landscape Ecology; http://www.greenlab.uniba.it/events/iufro2006/
Apr 19-21	17th Global Warming International Conference and Expo, Miami, Florida; http://globalwarming.net	Oct 4-7	IUFRO and EFI International Meeting, "Ecosystem Goods and Services from Planted Forests," Bilbao, Spain; http://www.iefc.net
May 21-24	Challenges in Coastal Hydrology and Water Quality, Baton Rouge, Louisiana; http://www.cee.lsu.edu/facultyStaff/Singh_Ve_jay/index.html	Oct 10-13	Conference on "Sustainable Forest Management with Fast Growing Plantations", Charleston, SC; contact Dave Wear dwear@fs.fed.us
*May 31-Jun 2	Workshop on "Critical Processes and Properties Regulating Carbon Cycling in Southern Forests," Southern Forest Research Partnership, Asheville, NC; http://sfrponline.net/events.htm	Oct 25-29	Society American Foresters Annual Meeting, Pittsburgh, PA
Jun 3-8	12th International Symposium on Society and Natural Resource Management, Vancouver, BC, Canada; http://www.issrm2006.rem.sfu.ca	Oct 23-27	Knowledge management in forestry conference, sponsored by KnowForAlp, hosted by Forest Research Institute Baden Württemberg, Freiburg, Germany
Jun 5-9	Fourth International Poplar Symposium, "Meeting the Needs of a Growing World through Poplar and Willow Science: Combining Traditional and Novel Approaches in the Genomic Era," Nanjing, China, IUFRO Poplar and Willow Working Party 2.08.04; http://ips2006.njfu.edu.cn/	Nov 12-16	Soil Science Society of American Annual Meeting, Indianapolis, IN; http://www.indy.org
Jul 18-20	Advances in Threat Assessment and Their Application to Forest and Rangeland Management, Boulder, Colorado; http://www.forestencyclopedia.net/encyclopedia/threats	Nov 13-17	3rd International Fire Ecology and Management Congress, San Diego, CA; http://emmps.wsu.edu/firecongress/
Jul 9-15	18th World Congress of Soil Science, in Philadelphia, PA http://www.18wcss.org	*Nov 14-16	SRS Management Team Meeting, joint with Region 8; Atlanta.
Jun 26-28	AWRA 2006 Summer Specialty Conference, Adaptive Management of Water Resources; Missoula, MT; http://www.awra.org/meetings/Montana2006/index.html		
Aug 6-11	Eighth International Conference on Mercury as a Global Pollutant Madison, WI; http://www.mercury2006.org/ ; DiCosto to attend and present paper		

Upcoming Events:

2007

- Feb 26-Mar 1 14th Biennial Southern Silvicultural Research Conference, Athens, GA;
- Summer 6th North American Forest Ecology Workshop, to be held in British Columbia
- Oct 24-28 Society American Foresters Annual Meeting, Portland, OR.
- Nov 4-8 Soil Science Society of American Annual Meeting, New Orleans, LA; <http://www.neworleanscvb.com>

2008

- Nov 5-9 Society American Foresters Annual Meeting, Reno, NV.



GPRA



GPRA



GPRA - Accomplishment

Category	FY 2004 Total	FY 2005 Total	FY 2006 To Date
Number of Refereed Journal Publications	20	21	18
Number of Non-Refereed Publications (include abstracts)	89	60	34
Number of Publications (refereed + non-refereed)	109	81	52
Number of Tours	41	40	22
Number of Short Courses/Training	20	13	10
Number of Invited Presentations to Scientific Organizations	12	7	16
Number of Invited Presentation to Lay Organizations	30	32	20
Volunteer Presentations to Scientific Organizations (non-GPRA	42	50	16
Number of Technology Transfer Activities (other than above)	105	132	55
Outside Funding	\$2,610,574	\$3,688,734	\$1,736,543

SRS-4104 Project Leader's Report

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